Commonwealth of Kentucky
Division for Air Quality

RESPONSE TO COMMENTS

ON THE CONDITIONAL MAJOR DRAFT PERMIT F-08-006
Mallinckrodt Baker, Inc.
7001 Highway 68 Bypass
Paris, KY 40361
August 20, 2008
Ralph Gosney, P.E., Reviewer

SOURCE ID:	21-017-00015
AGENCY INTEREST:	294
ACTIVITY:	APE20080001

SOURCE DESCRIPTION:

Mallinckrodt Baker, Inc. owns and operates a chemical purification and packaging facility located at 7001 Highway 68 Bypass, Paris, Kentucky. The source manufactures, packages, stores, and distributes multiple grades of solvents, acids, solutions, and bonded phase products. The significant emission units at the Paris facility include railcar and tank truck unloading, solvent and ether distillation, solvent and ether packaging, acid packaging, dry material packaging, two steam boilers, a fire-tube boiler, and fugitive emissions. Insignificant activities include various natural gas-fired space heaters, two small offset printing operations, solution blending and packaging, flammable solutions packaging, "hazard room" operations, FACSFlow™ mixing, acid storage tanks, a cooling tower, and various fuel oil and solution storage tanks as well as other operations.

The emissions from this source include: volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) from solvent/acid handling operations; particulate matter (PM/PM10) and particulate HAP emissions from dry material handling operations; particulate matter (PM/PM10), HAPs, carbon monoxide (CO), nitrogen oxide (NOx), VOCs, and sulfur dioxide (SO_2) from combustion units. All emissions from the combustion units are uncontrolled. PM/PM10 and particulate HAP emissions from dry material handling operations are controlled by either fabric filter baghouses or cartridge type dust collectors. The VOC and HAP emissions from the solvent/acid handling operation EP 12/15(--) (Automatic and Hand Filling Liquid Acids) are controlled by a packed-bed scrubber (Caustic Scrubber #1). The aqueous solution blending and packaging operation, which is listed as an insignificant activity in the permit, is also controlled by Caustic Scrubber #1. Additionally, a hydrofluoric acid storage tank is controlled by a venturi scrubber and a hydrochloric acid storage tank is controlled by a packed-bed scrubber (Caustic Scrubber #2). The hydrofluoric acid tank is listed as an insignificant activity in the permit.

An operating permit was issued to Mallinckrodt Baker on June 17, 1983 (No.: O-83-110), and it is the most recent operating permit on record. Since that time, several other construction permits have been issued to this source, with the most recent being C-82-033 (Revision 2) issued by the Division on July 29, 1994. The 1983 operating permit; various construction permits; and other construction/operating permit applications submitted since 1994, including a source wide operating permit application of February 1996 that was resubmitted on May 9, 2006 and January 14, 2008, were consolidated and updated to comply with current federal and State air regulations.

The maximum uncontrolled emissions of VOC and PM10 for this source are each greater than one hundred (100) tons per year. Additionally, the maximum uncontrolled emissions of a single HAP and combined HAPs are greater than 10 and 25 tons per year, respectively. The source has requested to take voluntary limits on the source-wide emissions of VOC, PM10, single HAPs, and combined HAPs to less than Title V major source thresholds. As such, the source will be issued a conditional major operating permit under 401 KAR 52:030, *Federally Enforceable Permits for Non-major Sources*. This is the initial conditional major permit for this source.

PUBLIC AND U.S. EPA REVIEW:

On July 16, 2008, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in *The Paris Bourbon Citizen* in Paris, Kentucky. The public comment period expired 30 days from the date of publication.

Comments were received from Chris Osgood, Environmental Health and Safety Manager of Mallinckrodt Baker, Inc. on August 15, 2008. Attachment A to this document lists the comments received and the Division's response to each comment. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed. Please see Attachment A for a detailed explanation of the changes made to the permit.

ATTACHMENT A

Response to Comments

The following comments on Mallinckrodt Baker, Inc.'s Draft Conditional Major Air Quality Permit were submitted by Chris Osgood, Environmental Health and Safety Manager:

Conditional Major Permit

1. Page 3 of 36, Condition B.2.Compliance Demonstration Method. b. – The formatting in the equation used to calculate annual SO_2 emissions requires updating. The limits on the sum, denoted by as "m" and "n" do not appear in the correct locations in the equation. Please update this equation as appropriate.

Division's response: The Division concurs with the comment and the referenced compliance equation has been revised.

2. Pages 4 and 9 of 36, Condition B.4.a and B.4. - It is presumed that a startup, shutdown, or malfunction (SSM) can be addressed through the general provisions pursuant to Section F of the permit and that these conditions do not apply during SSM. If these conditions apply during SSM, please add alternative language that allows the facility to take corrective actions prior to starting a 24-hour time period for performing a Method 9 test. The facility may be experiencing a temporary SSM that can be easily rectified and a full Method 9 test may not be required in such a situation.

Division's response: The permit has no been revised. As specified in Section E of the permit, 401 KAR 50:055 requires minimization of emissions at all times, including during periods of startup, shutdown and malfunction (SSM). Monitoring may be utilized to aid in the minimization of emissions at all times. Referring to 401 KAR 50:055, Section 1(1), emissions which, due to shutdown or malfunctions, temporarily exceed the standard set forth by the cabinet shall be deemed in violation of such standards unless the requirements of 401 KAR 50:055 Section 1 are satisfied and the determinations specified in subsection (4) of 401 KAR 50:055 are made. Refer Section F.7-9 of the permit for notification and reporting requirements for planned and unplanned startups and shutdowns; and malfunction reporting.

3. Page 6 of 36, Process Description - Please update the description of the control device associated with each emission point in the "Dry Materials Packaging" section of the permit. The term "estimated" should be inserted before "control efficiency" for each emission point, as was the case in the most recent version of the permit provided to Mallinckrodt Baker.

Division's response: The Division has not revised the permit as requested since the control efficiency information was provided to the Division by Mallinckrodt Baker in the application.

4. Page 10 of 36, Condition B.6.b. - This condition requires that a report be submitted in the event that one of the listed emission units is in operation, but the corresponding control system is not in operation. However, the condition does not specify the frequency at which this report must be submitted. Please update this condition to specify the frequency of reporting by adding the following sentence: "Copies of these reports shall be submitted as a part of the semiannual reporting as required in Section F (Conditions 5 and 6)."

Division's response: The Division concurs with the comment and the permit is revised accordingly.

5. Page 12 of 36, Conditions B.4a. and B.4.b. - The operating parameters for caustic scrubber #1 have been re-evaluated and we have determined that pH and jet spray nozzle pressure are not the preferred parameters to demonstrate proper operation of the scrubber. pH is not currently monitored for the control device. Additionally, the jet spray nozzles on the scrubber, as installed, were modified by the contractor who installed the unit in order to reduce the nozzle pressure, while keeping the liquid flow rate within manufacturer's design specifications. Therefore, the jet spray nozzle pressure for the unit may not be within the range recommended by the manufacturer even though the unit is operating properly. We request that these conditions be revised to require monitoring of the pressure drop across the scrubber bed and the scrubbing liquid flowrate to the scrubber.

   Additionally, daily monitoring of caustic scrubber #1 operating parameters is not feasible for days on which the caustic scrubber, and associated emission units, do not operate. We request that additional clarification be added to the permit to make it clear that daily monitoring of caustic scrubber #1 operating parameters is only required for days on which the caustic scrubber is operational. Based on these two comments, we request that Conditions 4.a and 4.b be revised to read:

   a. The permittee shall maintain, calibrate, and operate according to the manufacturer's specification, a monitoring device for the daily measurement of pressure drop across the scrubber at caustic scrubber #1, when the scrubber is in operation.
   b. The permittee shall maintain, calibrate, and operate according to the manufacturer's specification, a monitoring device for the daily measurement of the scrubbing liquid flowrate to the scrubber, when the scrubber is in operation.

Division's response: Monitoring and recordkeeping of scrubber pressure drop and scrubbing liquid flow rates are acceptable parameters for use in determining proper control device operations and the compliance with the related applicable emission limitations. The Division has revised the permit as requested by the source, except monitoring shall be required for those days when the emission unit is in operation, and not solely when the scrubber is in operation as requested by the permittee.

6. Page 12 of 35, Condition B.5.b. - As discussed in the comment above, we request that the operating parameters for which daily measurements are required be revised in this section. To reflect this revision, please update this condition to read:

b. The permittee shall maintain daily records of the pressure drop across the scrubber and scrubbing liquid flowrate to the scrubber for caustic scrubber #1. The permittee shall include in its daily record when a pressure drop or flowrate measurement is not taken and the reason for the lack of a measurement (e.g., the process did not operate that day).

Division's response: The Division has revised the permit as requested by the permittee.

7. Page 13 of 36, Condition B.7.a. - As discussed in the comment above, we request that the operating parameters for which daily measurements are required be revised in this section. To reflect this revision, please update this condition to read:

   a. The permittee shall maintain the pressure drop across the scrubber at caustic scrubber #1 within the range recommended by the manufacturer or established during the most recent stack test.

Division's response: The Division has revised the permit as requested by the permittee, inclusive of the scrubbing liquid flowrate.

8. Page 15 of 36, Applicable Regulations - 401 KAR 63:020 is a requirement that is applicable to the Solvent Packaging Area (EP13/14), Solvent/Ether Packaging Area (EP 17), and Bulk Material Receiving (EP 23 and EP24). Therefore, this regulation should be listed in the "Applicable Regulations" section on Page 15 of 36.

Division's response: The Division has revised the permit as requested by the permittee.

9. Page 19 of 36, Condition B.6.g. - This condition states "For Stills #1 and #3, the permittee shall comply as follows:", however the following section lists a requirement that applies only to Still #3. Therefore, please update this condition to state: "For Still #3, the permittee shall comply as follows:"

Division's response: The Division concurs with the comment and has revised the permit as requested by the applicant.

10. Pages 22 and 23 of 36, Conditions D.3.c.(1).(ii). and D.3.c.(2). - Please add the term "mobile" before "side stations" in this condition for consistency with the description of these emission units in Condition D.3.c.CDM.a and in the Statement of Basis.

Division's response: The Division concurs with the comment and has revised the permit as suggested by the source.

11. Pages 24, 25, and 26 of 36, Conditions D.3. Compliance Demonstration Method. b., D.5.b., and D.7.a.(2). - Compliance demonstration method in these conditions requires monitoring, recordkeeping, and reporting of 12-month rolling dry packaging throughput; however, these values are not required for the calculation of actual emissions from dry packaging emission units. Particulate matter emissions from the dry packaging sources will be calculated based on the outlet grain loading rate and the control system air flow rate for each particulate matter control device. Please remove the requirements to monitor, retain records, and report the total material throughput for dry material packaging sources (EP 05, EP 07, EP 08, EP 09, EP 10, and EP 11) because these values are not required to demonstrate compliance with the permitted emission limits or operating limitations.

Division's response: The Division has revised the permit as suggested by the source.

12. Page 25 of 36, Condition D.5.b. - Please update this condition to move the word "and" from the third-to-last to the second-to-last item in the list, as shown below:

    "(5) Clean Room/Dust & Stain Room (EP 10);
    (6) Dry Salts Packaging (EP 11); and"

Division's response: The Division has revised the permit as requested by the permittee.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.